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Nota di contenuto	Beginning Linux Programming, 4th Edition; About the Authors; Credits; Acknowledgments; Contents; Foreword; Introduction; Who's This Book For?; What's Covered in the Book; What You Need to Use This Book; Source Code; Conventions; Errata; p2p.wrox.com; Chapter 1: Getting Started; An Introduction to UNIX, Linux, and GNU; Programming Linux; Getting Help; Summary; Chapter 2: Shell Programming; Why Program with a Shell?; A Bit of Philosophy; What Is a Shell?; Pipes and Redirection; The Shell as a Programming Language; Shell Syntax; Going Graphical - The dialog Utility; Putting It All Together SummaryChapter 3: Working with Files; Linux File Structure; System Calls and Device Drivers; Library Functions; Low-Level File Access; The Standard I/O Library; Formatted Input and Output; File and Directory Maintenance; Scanning Directories; Errors; The /proc File System;

Advanced Topics: fcntl and mmap; Summary; Chapter 4: The Linux Environment; Program Arguments; Environment Variables; Time and Date; Temporary Files; User Information; Host Information; Logging; Resources and Limits; Summary; Chapter 5: Terminals; Reading from and Writing to the Terminal; Talking to the Terminal
The Terminal Driver and the General Terminal InterfaceThe termios Structure; Terminal Output; Detecting Keystrokes; Summary; Chapter 6: Managing Text-Based Screens with curses; Compiling with curses; Curses Terminology and Concepts; The Screen; The Keyboard; Windows; Subwindows; The Keypad; Using Color; Pads; The CD Collection Application; Summary; Chapter 7: Data Management; Managing Memory; File Locking; Databases; The CD Application; Summary; Chapter 8: MySQL; Installation; MySQL Administration; Accessing MySQL Data from C; The CD Database Application; Summary; Chapter 9: Development Tools
Problems of Multiple Source FilesThe make Command and Makefiles; Source Code Control; Writing a Manual Page; Distributing Software; RPM Packages; Other Package Formats; Development Environments; Summary; Chapter 10: Debugging; Types of Errors; General Debugging Techniques; Debugging with gdb; More Debugging Tools; Assertions; Memory Debugging; Summary; Chapter 11: Processes and Signals; What Is a Process?; Process Structure; Starting New Processes; Signals; Summary; Chapter 12: POSIX Threads; What Is a Thread?; Advantages and Drawbacks of Threads; A First Threads Program
Simultaneous ExecutionSynchronization; Thread Attributes; Canceling a Thread; Threads in Abundance; Summary; Chapter 13: Inter-Process Communication: Pipes; What Is a Pipe?; Process Pipes; Sending Output to popen; The Pipe Call; Parent and Child Processes; Named Pipes: FIFOs; The CD Database Application; Summary; Chapter 14: Semaphores, Shared Memory, and Message Queues; Semaphores; Shared Memory; Message Queues; The CD Database Application; IPC Status Commands; Summary; Chapter 15: Sockets; What Is a Socket?; Socket Connections; Network Information; Multiple Clients; Datagrams; Summary
Chapter 16: Programming GNOME Using GTK+

Sommario/riassunto

Beginning Linux Programming, Fourth Edition continues its unique approach to teaching UNIX programming in a simple and structured way on the Linux platform. Through the use of detailed and realistic examples, students learn by doing, and are able to move from being a Linux beginner to creating custom applications in Linux. The book introduces fundamental concepts beginning with the basics of writing Unix programs in C, and including material on basic system calls, file I/O, interprocess communication (for getting programs to work together), and shell programming. Parallel to this, the b